EPA's Clean Power Plan Gives States Much Needed Flexibility in Reducing Power Sector Emissions

Romany Webb August 10, 2015

Last week, President Obama took a major step in the fight against climate change, unveiling the long awaited Clean Power Plan. The Plan, which was developed by the U.S. Environmental Protection Agency (EPA), establishes the first-ever national standards limiting carbon dioxide emissions from fossil fuel power plants. The Plan aims to reduce power sector carbon dioxide emissions by 32 percent below 2005 levels by 2030. It will also have the co-benefit of reducing emissions of sulfur dioxide (by 90 percent below 2005 levels) and nitrous oxide (by 72 percent below 2005 levels).

In developing the Clean Power Plan, EPA relied on its statutory authority to regulate existing stationary sources of air pollution under section 111(d) of the Clean Air Act (42 U.S.C. § 7411(d)). Section 111(d) creates a partnership approach, whereby EPA sets targets for reducing air pollution, and the states determine how to meet those targets. EPA proposed targets for carbon pollution from existing fossil fuel power plants in June 2014. After a lengthy review, the EPA is now finalizing the targets, with some changes.

The Clean Power Plan establishes state-wide targets for power sector carbon dioxide emissions. Interim targets will apply during the phase-in period from 2022 to 2029, with final targets taking effect in 2030. The states are required to develop and implement plans to ensure both the interim and final targets are met. (Notably, plans are not required from Vermont or the District of Columbia. Those jurisdictions have been excluded from the Clean Power Plan as they do not have fossil fuel power plants. Alaska and Hawaii, along with Guam and Puerto Rico, have also been excluded as insufficient data was available to establish emissions reduction targets therefor.)

Compared to the draft released in June 2014, the final Clean Power Plan incorporates a number of changes, designed to address stakeholder concerns. After releasing the draft, EPA held a 6 month public consultation, during which it received over 4.3 million comments. Many of those comments questioned the fairness of the draft proposal. Under the draft, state emissions reductions targets were calculated based on a complex algorithm, resulting in significant variation between targets. At one end of spectrum, Washington was required to reduce its power sector emissions by 71.6 percent between 2012 and 2030, while only a 10.6 percent reduction was required in North Dakota.

Responding to these concerns, EPA has revised the state targets, such that they now fall within a smaller range. Montana has the highest target at 47.4 percent, while Connecticut has the lowest at 7.1 percent. The revised targets were calculated by applying a uniform emissions performance rate to fossil fuel power plants in all states. The rate reflects the extent to which power plant emissions could be reduced through application of the best system of emission reduction (BSER). The BSER is based on three building blocks, namely: (1) heat rate improves at coal-fired power plants, (2) increased utilization of natural gas combined cycle units, and (3) increased use of renewable energy. (In a departure from the draft, under the final Clean Power Plan, the potential for increased energy efficiency was not considered in setting the state targets).

The Clean Power Plan sets both rate-based emissions targets (expressed in pounds of carbon dioxide per megawatt hour) and mass-based targets (expressed in tons of carbon dioxide per year). This represents a change from the draft, which proposed only rate-based targets (but allowed states to convert those targets into a mass-based form). The addition of mass-based targets is intended to provide the states with greater flexibility in developing emissions reduction strategies. It is a move likely to be welcomed by industry participants.

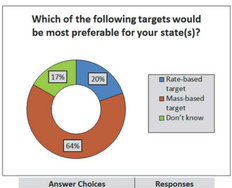
In the spring, the Kay Bailey Hutchison Center for Energy, Law, and Business surveyed state officials and industry participants on key issues relating to implementation of the Clean Power Plan. The survey, which was completed by 66 respondents, disclosed a clear preference for mass-based emissions targets. Almost two-thirds (64 percent) of respondents indicated that they would prefer a mass-based target over a rate-based target, arguing that the former is easier to implement, particularly where there is a mass-based trading program.

With mass-based trading, fossil fuel power plants must hold credits or allowances for each ton of carbon dioxide emitted. These credits may be traded, meaning that plants which are able to reduce emissions at low cost can make large reductions, while those facing high costs are free to make smaller reductions. Mass-based trading should, therefore, achieve a given level of emissions reductions at the lowest possible cost. For this reason, it is likely to be a popular means of complying with the Clean Power Plan.

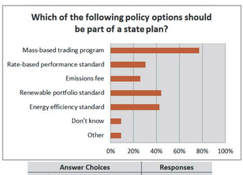
The KBH Center's survey found strong support for the use of mass-based trading programs. This approach was especially popular among power company executives, with 83 percent of those surveyed favoring mass-based trading. Similarly, 68 percent of state officials surveyed also favored mass-based trading. While support was highest among officials in states controlled by Democratic governors (73 percent), there was also strong support in Republican-controlled states (62 percent).

Many survey respondents also supported the use of complementary policies such as renewable portfolio standards and energy efficiency measures. These policies, which apply to activities "beyond the fence line" of fossil fuel power plants, reduce emissions by limiting the dispatch of those plants. Despite questions regarding the legality of this approach, many states will likely adopt at least some beyond the fence line measures. In the KBH Center survey, 60 percent of state officials supported the adoption of renewable portfolio standards, while 54 percent of officials favored energy efficiency measures.

Recognizing this, EPA's Clean Power Plan gives states considerable flexibility to adopt beyond the fence line measures to meet their emissions reductions targets. States may also use other approaches, including mass-based trading or similar market-based programs, to meet the targets. Just what combination of policies each state will adopt remains to be seen.



Answer Choices	Responses	
Rate-based target	13	20%
Mass-based target	42	64%
Don't know	11	17%



Answer Choices	Responses	
Mass-based trading program	51	77%
Rate-based performance standard	20	30%
Emissions fee	17	26%
Renewable portfolio standard	29	44%
Energy efficiency standard	28	42%
Don't know	6	9%
Other	6	9%

Further information about the KBH Center's survey can be found at http://kbhenergycenter.utexas.edu/news/kbh-energy-center-releases-report-highlighting-insights-from-industry-experts-and-state-officials-on-implementation-of-epas-clean-power-plan/

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